Computer Sciences Corporation
Federal Sector/Civil Group
Wallops Island, VA 23337

CI - Continuous Improvement Submittal

Date: February 28, 2001

Initiator: Katherine Chamberlain, Task 7

Specific Objective (What): Re-write video disdrometer software to make it usable for TRMM scientists. [Note: For brevity, I will refer to the video disdrometer as "2DVD."]

Implementation Strategy (How):

Last July, the NASA TRMM Ground Validation Office purchased a specialized software package from Joanneum Research, Institute of Applied Systems Technology, in Austria for $3000. The package entitled "2D-Video-Disdrometer Raindrop Orientation Software Package" was primarily intended to provide scientists with the ability to determine the canting angle of raindrops and thereby correct for canting angle effects on drop diameter, among other parameters. However, the software turned out to be virtually useless because output was to the screen only (i.e. no output file was created). The program generates a multitude of parameters for each drop in a rain event. This was impractical considering there may be hundreds of thousands of drops per event, and the user would have to copy the data from the screen drop by drop. The user would subsequently have to enter the drop parameters into a file manually.

I re-wrote the program to output only the specific parameters required for our analyses and to redirect the output to an ASCII file.

Implementation Schedule (When): I re-wrote the program in July and re-processed all 2DVD data that had been collected on Wallops Island since April 2000. By mid-September, I had re-processed all 2DVD data from three major field campaigns (TEFLUN-B, LBA, and KWAJEX). I delivered results in ASCII format to the TRMM scientists. The software continues to be used as we collect data on Wallops Island.

Estimated Six-Month Savings: The savings are difficult to quantify. Had the software not been rewritten, the original $3000 would've been wasted. The excessive time required to retrieve the necessary drop parameters would've precluded any data re-processing at all. We could not have devoted our time solely to this tedious task.

Estimated Continuing Savings: This "Continuous Improvement" is an example of doing things "better and faster" more so than "cheaper."

Task Assignment Monitor Consulted? Yes **Date: July 2001**